226 obtained from augmented Kern, near present town of Kernville.

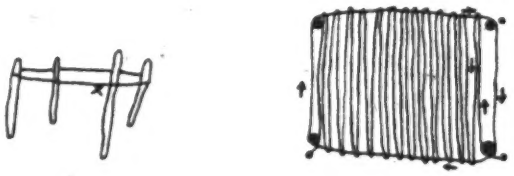
Fishing techniques and use of certain localities for fishing varied according to height of streams and temperature of water; location of few fish camps noted (p. 40). In spring before water too warm, fishing carried on at sites on augmented Kern. At rapids near w. end of gorge "there were lots of fish; the Tolowim (Bankalachi) used to camp there to fish, also the Tejon Indians (Yokuts) and Pahkanapil too. Sometimes the Monilabal and Palabatal (Yokuts groups) came up there to fish" (SM). Groups of Tübatulabal also camped at rock paintings farther upstream; fish harpooned from rocks mainly at these locations as water swift-running, with many pools.

[411] [227] Pronged harpoon California type (Kroeber, Handbook, 86) consisting of pole (mi·št) 7-8 ft. long, with pair 6-in. foreshafts; toggleheads (wili·li·nist) 1 1/2 in. long, carved from deer bone; heads sharply pointed, barbed. Later in summer fishing activities shifted higher up river to sites on unaugmented Kern and to mt. lakes and streams. Round nets made of native twine, with 3-4 in. meshes and lacking handle, were used, being held up on each side by 2 men standing in water (FP); SM denied use of nets. Large nets, similarly made, stretched across stream, held up by 4 men (PN, FP). Net sinkers not used (FP, PN). Tule basket trap (wa·mat), similar to Pomo trap (Kroeber, Handbook, 172, pl. 33a), used in smooth water. Fish taken in nets speared (PN). [321] Fishhooks (wele·haniš) were said to have been 2-piece, with single bone barb made from shank bone of deer. Barb filed to point on rock, blunt end attached at 45° angle to base of shank with wrapping of native twine which was given coating of asphalt to make it fast. [283] Line made from native twine, smeared with asphalt; attached to end of long willow pole (wipšat). Earthworms, grasshoppers used for bait (ti·hat). Fishhooks and pole "not used very much" (SM); post-white (?). No double hooks, gorgets used.

226 476 417 Bulk of communal fishing in streams, rivers done to obtain fish for drying. Informants dwelt upon one method of communal fishing, although it is no longer practiced. Fish corral (pa·nil) built in shallow, fast-running water (fig. 2), "when there were lots of fish running." Wall of corral 2 1/2-3 ft. high; built up of large stones filled in with willow branches; diameter of round enclosure 7 ft., width of opening to corral 3 ft. Men went about 2 mi. downstream from corral, threw stones in water to drive fish upstream. Two men, stationed on either side of gateway to corral, beat water with long willow poles so that [462] all the fish would swim into corral. Inside corral 2, 3 men bailed out fish, throwing them up on bank to women who collected them in large pile. Each participant in undertaking shared equally in distribution of fish, which was effected in same manner rabbits apportioned after drive (p. 13).

226 Another method of obtaining fish in large

281 on thigh immediately and ends tied together to
286 make long strip which was stretched between 2 trees to dry for 2-3 days (SM). FP said whole skins dried first, then cut into strips which were rolled, then tied together.



a b

Fig. 10. Rabbitskin blanket weaving frame. a, model of frame, with beginning of warp setup shown (x); b, completed warp setup.

To set up warp (fig. 10), 4 posts 3 ft. high set in ground several feet apart to form square or rectangle of same size as blanket would be; length of native twine tied around post, near top, then run around outside of 4 posts; when it was brought back to starting point twine was passed under and over string on 2 opposite sides of frame until complete warp set up. Rabbitskin weft element then tied to warp at one corner and twined under and over warp threads. SM, who set up model of frame and warp, did not know whether weft was tied to each warp at point of intersection. Blankets used as capes, bed coverings. Squirrelskin, feather blankets not made (SM, FP, PN).

531 Beadwork formerly lacking (SM); ES had learned
177 to make beaded hat bands on bow loom (Steward, 1933, 273, fig. 6) from her sister-in-law, an Owens Valley Paiute who occasionally visited among Tübatulabal.

286 Nets.- Nets made, used by men; manufactured from 2-ply native twine. Rabbit net was 200 ft. long, 3-3 1/2 ft. wide, with 3-in. loops; man's
[171] carrying net similar to Koso net (Kroeber, Handbook, 591, fig. 53): was tied at both ends with twine and had 2 ends tied together; net carried over shoulder (SM). Fish nets, according to FP, who could not remember names for them, were of 2 types (p. 14), but details of their manufacture could not be obtained.

283 Pack strap.- Pack strap (pongon) made from
482 native rope with forehead band (le·winišt) which was flat, 1 in. wide, made from 4 strands of native twine. Used with pack basket.

Twine, cordage.- String (u·wil) made from in-
[171] ner fibers of milkweed shoots (ma·wil), Apocynum cannabinum L., foothill floral area, as among Northfork Mono (Gifford, 1932 b, 28); twine always 2-ply, but of varying thickness depending on use for which it was intended. As length of cord grew when it was being rolled out on thigh,

283 it was wrapped around left wrist. Made by men, women; used extensively for nets, fish lines, bridles, forehead band on pack strap, loops on pack basket, on water bottles, as warp for rabbitskin blankets, bowstring for rabbit bows, foundation for eagle dance skirts, to tie babies on cradles, tie newborn child's umbilical cord, as thread to sew up sacks, etc.

Rope (tu·mayu·t) made from outer bark of Fremontia californica Torrey (u·pul); long branches, trunk of shrub peeled, fresh bark softened between hands and 3 strands braided into rope which was used to lash bundles of tules together for raft, to tie up crook on piñon staves, to bundle firewood into load, for 2 ends of pack strap, etc.

LEATHERWORK

281 Tanning.- Tanning done chiefly by men, although women sometimes dehaired skins. Green hides (tu·šu·but) hung up to dry, doubled over line with skin side out, for 6-8 days. If not to be tanned immediately they were folded up, stored in house. When tanned, hide soaked in cold water 8 days (SM); MM said soaked for week, being taken out at intervals and as much hair as possible [412 171] pulled out with fingers. After thorough soaking, hair and fat, if any, scraped off with deer-bone scraper as among Surprise Valley Paiute (Kelly, 118). Hide put in warm water to which deer brains had been added, and soaked overnight. Next morning hide dried, then returned to brain solution, [401] soaked again for 24 hours. Hide then rinsed out in clear water, looped around post and wrung out using short stick as lever (Kelly, pl. 21a, b). Lever, with hide still tightly twisted into coil around it, stuck between pole on which hide was looped and another pole 1 ft. away and hide left thus, tightly twisted, for about 30 minutes; after this hide slipped off lever, flattened out, stretched, rolled, and rubbed between hands. After fibers thus partly softened, hide draped over horizontal bar set into forks of 2 upright posts 3 ft. high, 3 ft. apart; hide pulled back and forth over bar, man often working with hide thus at intermittent intervals for 2-3 days. Tanned hides (takta·šat) not smoked; sometimes whitened; negative 15-6273 shows Tübatulabal man softening clay-whitened deerskin.

Skins to be tanned with hair on, as wildcat skins used for wrapping up infants, were scraped clean on skin side, skin wet, and deer brains, which had been soaked in small amount water, rubbed into hide with hands. Hide then allowed to dry and pulled, rubbed between hands until soft. Bear hides also tanned with hair left on, brains being worked in with scraper.

237 Fresh deer brains could be used for tanning hide, but usually dried brains used, prepared as follows. Deer skull cracked open with rock, brains scooped out, smeared over both sides cir-